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BY KIM S. NASH



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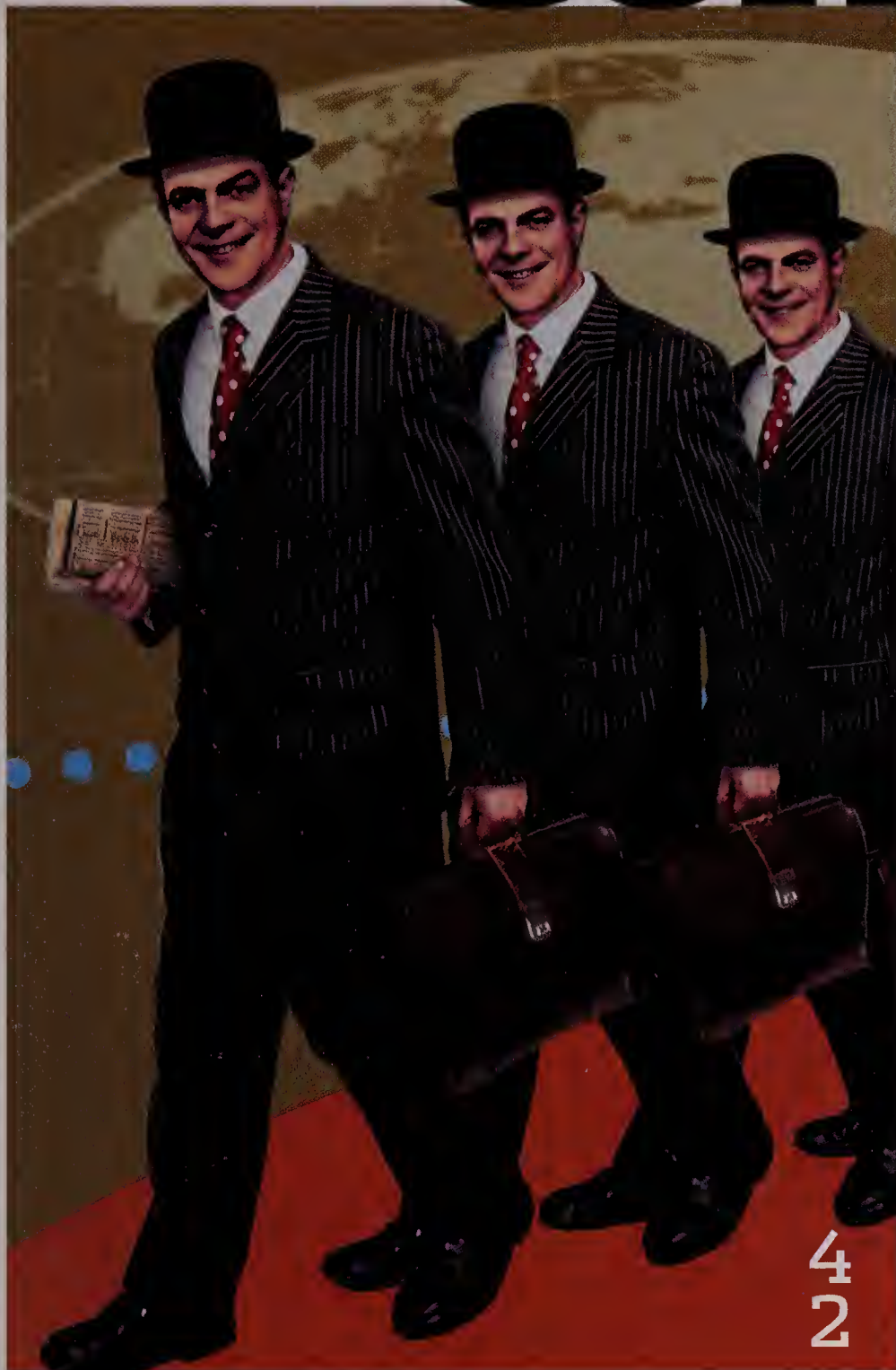


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In what analysts describe as a risky strategy, Google recently revealed new features being developed for its Google Apps software, inviting customers to try them. Whether or not enterprises can be convinced to experiment with the software remains to be seen.

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A rushed Oracle ERP rollout has created the mother of all business problems for Overstock.com. Its restating earnings data back to 2003, to the tune of a \$12.9 million reduction in revenue and an additional \$10.3 million net loss.

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Steve Jobs

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Agile Giants

How big companies are adapting to change



If things just stayed the same, life would be simple. But nothing ever stays the same, certainly not in today's business environment.

Most companies get this, and they're working hard to build more flexibility and agility into their business models, culture and processes. The need for speed, the need for adaptation, has never been more pressing. We are living Darwin's theory—only sped up by a factor of 10.

While being a multibillion-dollar company has many inherent advantages, agility is not one of them. So how does a large organization build that into its DNA? I moderated a panel on this topic recently with three large-company IT executives who all had some well-earned battle scars from the change wars. We talked about the economic climate and why a focus on the customer is more important than ever. All three ranked customers (finding, acquiring, serving and retaining) as their company's top priority.

But few large organizations are currently built to have a single view of the customer or, conversely, to present a single view of the company to the outside world. There are too many unconnected systems, databases and processes; too many parochial interests and needs. And while the tools exist today to make those connections happen (this was a conference about business process management), getting people to buy into major change is really hard.

To get stakeholders to move beyond self-interest and to buy into change for the good of the enterprise, the panelists offered the following recommendations:

1. Base your case on the customer, not internal needs. If you can convince people that the change you're proposing will serve customers better, you're halfway there.
2. Make sure the CEO not only supports the change but pushes it.
3. There has to be a change agent driving the project, but make sure this person is tightly affiliated with the business affected, not a separate "change manager."
4. Train all affected employees in common values, beliefs and behaviors around the new way of doing things, and link results to rewards and recognition.
5. Use tools to model the new processes. The days of trying to capture requirements in a formal document, up front, are over. RIP.
6. Deliver results along the way.
7. Finally, make sure this is positioned as a business change so IT doesn't get blamed for the inevitable pain!

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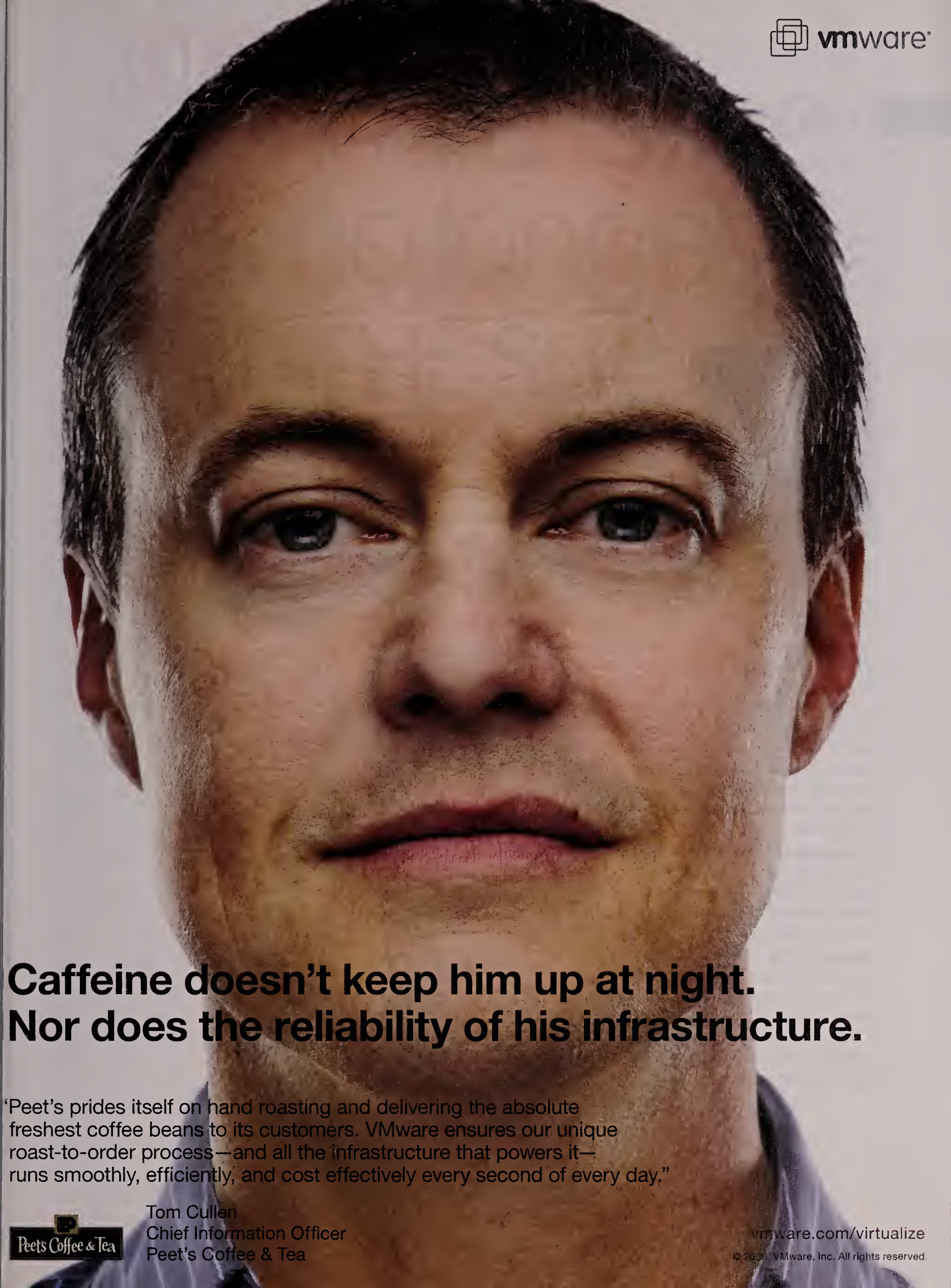
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Shifting Priorities

CIOs face some big challenges in the year ahead



The economy is causing us to reexamine our priorities. CIOs have a pretty extensive list of critical issues to manage, and while they have been shuffled around a bit, it seems that they are falling into four buckets.

Globalization: No matter how bad business gets, "the world is flat" and CIOs are focused on making their global operations run more smoothly. The ability to connect, communicate and collaborate across the globe in a seamless manner is no

less a priority now than it was 60 or 90 days ago. Customers and suppliers all want to work with you in a real-time environment on a global basis.

Transformation: Automating business processes, digitization, sustainability, imaging and e-discovery are just a few examples of business initiatives that are gaining the attention of the CIO as further cost efficiencies are required. No matter what the economic condition, these initiatives will require your attention in the year ahead.

IT modernization: As Baby Boomers begin to retire (hopefully they still can) and companies contemplate further standardization, the theme of IT modernization is coming up more and more. Gartner recently stated that this is a top priority because IT systems and services lack the agility to respond to business requests for change. Increasing integration among portfolios, growing obsolescence of deployed assets and a skills crisis throw fuel on the fire. I can see why this is hitting your list.

Innovation and risk mitigation: Businesses that have the ability to balance these two priorities during a difficult economic climate are going to be the ones that will rise to the top when the dust settles. In a recent column by *CIO* Editor in Chief Abbie Lundberg, Dave Olverson, director of IT and blogger of TechyPundit.com, states, "No risk means no innovation. The trick is to embrace the risk and actively manage it because not doing so means stagnation." At the same time, one must make sure that the proper amount of risk is being taken and measured to hopefully ensure some level of success. Finding the right balance between these two takes a bit of art and science.

I am sure that your list is much longer than this, but if you are able to make headway on these four big issues in the next 12 months, you will have had a very successful year.

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trendlines

EDITED BY STEFF GELSTON

NEW * HOT * UNEXPECTED

CIOs Slash Budgets, Start Layoffs

ECONOMY As the U.S. economy melts down, so are technology budgets and staff counts.

Forty percent of CIOs plan to cut their budgets from last year's level, with contractors and discretionary technology projects two of the first items to get the knife, according to *CIO*'s exclusive survey of 243 technology leaders in October. Another 34 percent have jammed on the brakes, planning to keep budgets the same as they were 12 months ago.

The road to cost cutting has been clear, as documented in a series of *CIO* magazine studies conducted in March, July and October (see chart). On budgets, for example, 17 percent said in March that they would make cuts in the coming year. In July, that percentage jumped to 26 percent, then leapt to this month's 40 percent figure.

"Until September, we thought the economy would recover in the back half of 2009. Now, not a prayer," says Rick Belmonte, CIO at Lowe Enterprises, a real

IT Budgets Feel the Pinch

CIOs continue to clamp down on future IT budget plans in response to the economy's woes



estate development firm. Belmonte has deferred all new technology development projects until 2010, including a Hyperion forecasting application and an Oracle project management system. He also cut

Continued on Page 12

Remote Workers to IT: We Care About Security

TELEWORK Fear not IT and infosecurity personnel. Most remote workers, mobile users and road warriors toting around laptops and BlackBerrys have the business's best interests in mind when it comes to network security, according to a survey from mobility vendor Fiberlink.

Seventy percent of remote workers say they would rather get their work done on a secure network connection, even if it meant their assignment would be late. In addition, 96 percent say their IT department does a good job enabling mobility by sup-

plying devices, providing network access and helping them stay connected when working remotely.

More love for IT: Almost 78 percent of respondents say their IT department has provided them with technology that lets them use their own PC while working remotely.

This is not to say that remote workers can't put their organizations at risk. Almost one in four have altered security settings or purposefully delayed security updates. Many have downloaded personal pictures and videos (43 percent) or software

for their own use (31 percent) on their company laptops.

And 25 percent admit visiting inappropriate websites on their corporate laptops. Lastly, just how important has Internet connectivity become to remote workers? The survey found that 74 percent of mobile workers can't get their jobs done without the Internet. In addition, almost two-thirds of those surveyed believe it would be easier to live without their car for a week than without the Internet.

—Thomas Wailgum

Avoiding Costly Data Breach Notifications

PRIVACY Organizations spend serious money dealing with data breach notifications—millions of dollars that could be better spent on improving security procedures or technology, according to Bart A. Lazar, a partner with the law firm of Seyfarth Shaw.

The CIO and the legal department can try and limit the risks associated with incident response while conserving resources, says Lazar. He offers five tips that shouldn't break the bank.

Encrypt personal information on laptops. It is expensive (approximately \$50–\$100 per laptop), but worth the cost. Also, the unauthorized access or disclosure of encrypted information does not trigger the sending of notices under most state database security laws. Just make sure that it is at least 128-bit encryption.

Replace or truncate social security numbers. If your business can substitute another number, you will create a fairly unique identifier that is difficult to use for identity theft purposes and should take you out of most state database security breach law scenarios.

Conduct due diligence on vendors. The CIO or an IT employee should interview the vendor's CIO or inspect the premises as part of awarding a contract.

Check the garbage. Several security enforcement proceedings were the result of thefts by cleaning contractors, or failure of a company to properly shred personal information.

Communicate policies to employees. Often, companies have good policies in place. The problem is that employees have not been asked to confirm that they have read and understood the policies or they are not trained on the policies.

—Bart A. Lazar

Budget Cuts

Continued from Page 11

outside consultants as well as 20 percent of his full-time staff, now down to 60 to 65 people.

"I might lose more people I don't want to lose because good people want to do new projects, not just maintain older systems," he says.

Seventy-two percent of IT leaders in our survey have postponed or will postpone discretionary projects. Of the 51 percent who had a financial contingency plan in place, 35 percent have already launched it and another 17 percent plan to do so within six months.

Conseco, a \$4.6 billion insurance company, has pushed a few projects planned for 2008 to 2009, says EVP and CIO Russ Bostick. But despite losing \$180 million in 2007, Conseco hasn't cancelled any projects underway, he says.

James Sutter, senior partner at IT management firm The Peer Consulting Group, says emergency measures are par for the course. Sutter, a former technology executive at Rockwell and Xerox, notes: "A financial crisis will wash out initiatives that really don't stand the needs test." It will also wash away jobs.

Jobs are frozen at many companies, with 46 percent of survey respondents already letting open positions go unfilled. Another 13 percent plan to invoke that option in the coming months.

The big worry, with good reason, is layoffs. Most respondents, 66 percent, said they have no plans to shrink headcount. However, others have already started. Twenty-three percent of respondents have reduced staff in the last six months; another 11 percent plan to in the next six months.

At Lowe Enterprises, layoffs have been "very difficult for us," says CIO Belmonte. "We let people go who had been here a long time." Another round, he says, is possible.

—Kim S. Nash

Economy Squeezes Biz Travel

TRAVEL Drop that suitcase. Economic uncertainty and high fuel costs are taking a toll on business travel. In 2009, one-third of travel managers will cut spending. What they are cutting:

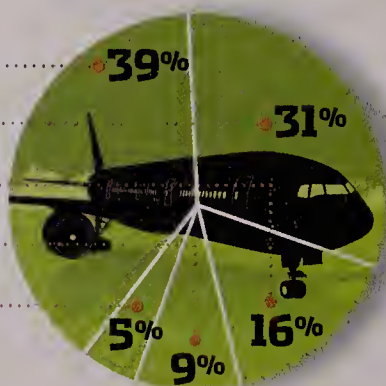
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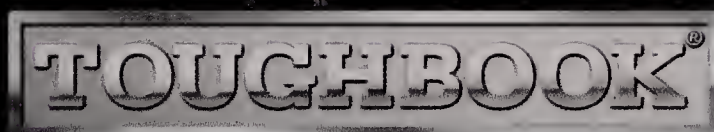


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Economic Woes May Lower SaaS Prices

SOFTWARE The ongoing global economic crisis may spark a pricing war in the SaaS (software-as-a-service) arena, according to a major vendor in the space.

At an investor conference last month, Salesforce.com Chief Financial Officer Graham Smith discussed the company's readiness to lower prices in order to remain competitive. "It won't surprise me if, going forward in these times, we see much more aggressive pricing. That's sort of typical," says Smith. "We are able to match pricing."

Smith indicated that Salesforce.com, known for its customer relationship management (CRM) software, is not about to run a closeout sale.

SaaS vendors typically cite a handful of advantages to the model such as no need to buy and main-

tain new hardware, faster deployment and easier upgrades. So while some price cutting may be at hand, such factors could also compel more customers to adopt SaaS, according to Forrester Research analyst Ray Wang.

But another observer believes Smith's prediction will be borne out in the market. "We were already predicting something of a battle on pricing given how aggressive Microsoft is being around Dynamics CRM Online. I guess the economic doom and gloom just lifts that," says 451 Group analyst China Martens. "I've yet to hear the same price-cutting story from other SaaS players name-checking the economy, but it's sure to come."

Beyond the world's economic woes, SaaS has now reached a cer-

tain level of maturity, and customers have had time to measure costs and their return on investment compared to on-premises software deployments, Martens says. (Read "SaaS and the IT Staff," Page 42.)

Meanwhile, other on-demand vendors acknowledged that pricing could become an issue but, overall, painted themselves as being in a sound position to weather the rocky financial times.

—Chris Kanaracus

CORRECTION In the story "Building IT for the Future" (Nov. 1), we provided the wrong name for the company that helped Bechtel develop a policy-based security model. It is Juniper Networks. We are sorry for the error.

TRENDS

The Danger of Being Too Nice at Work

CAREER If you're a nice person, you probably think that being nice works to your advantage in the office. Right?

Not necessarily. What nice people may not realize is that being too nice can seriously stymie their career growth and success, says Russ Edelman, CEO of Corridor Consulting, and coauthor of *Nice Guys Can Get the Corner Office: Eight Strategies for Winning in Business Without Being a Jerk*. "The people in business who suffer from nice-guy syndrome are not achieving their true potential," he says.

The problem with nice, according to Edelman, is that you run the risk that people will take advantage of you.

Nice is not just a problem for individuals. It's a problem for businesses, too. Employees who

are too nice cost their companies time and money. In a survey of 50 CEOs, Edelman asked about the impact of "being too nice" on their businesses. The CEOs said that, on average, being too nice has the potential to cost them eight percent of their gross revenues. In other words, they believed their companies could have earned more money by being more aggressive.

Edelman notes that managers who are too nice are reluctant to make decisions on their own. They fear confrontation or hurting the feelings of others, so they include everyone in their decision making. That wastes time and can lead to missed opportunities. "If you appease everyone, if you fear hurting people's feelings, you do a disservice to whatever project you're working on, to yourself and your business," he says.

Softies need to toughen up, says Edelman. "I'm not advocating that people become jerks," he says. "But they need to find a balance to stay true to their nice nature while also being appropriately assertive and protecting their interests."

—Meridith Levinson



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by the numbers

BY MARGARET LOCHER

Mash-Up or Smash Up?

Users can get in over their heads when they try to combine Web-based apps. Here's what you need to know.

Mash-ups are coming to an enterprise near you. New tools and services like Yahoo Pipes and Microsoft Popfly make it easy for nontechnical users to create and share mash-ups, those custom Web applications that combine and display multiple sources of data into something new. But that doesn't mean CIOs won't need to be involved.

Business users can go too far on their own. "The very thing that makes mash-ups so beneficial will likely come back and bite you," writes Forrester senior analyst Mike Gaultieri in "Enterprise Mashups: Lead, Don't Follow." Users get started without IT but then hit a road block. Or, their simple mash-up becomes a massive application that is not scalable or built for integration.

Forrester projects that adoption of enterprise mash-ups will break 10 percent in 2012, so CIOs need a plan for how to address them within their organization.

First, understand what constitutes a mash-up. "The word is used by many companies to describe the combination of anything. The key feature of mash-ups is that they allow users to combine two or more sources of data to create a new view of that data," says Gaultieri. Host a training session before giving users access to a mash-up tool. Help them understand whether a mash-up is what they need. Once users are trained, provide support via help desk scripts and production assistance. Users will rely on their mash-ups, so they need help if they hit trouble. CIOs can assist by making sure the mash-up platform is operational and underlying data services and sources are running.

Gaultieri says enterprise mash-up platforms are still immature, but as users become more familiar with Web 2.0 technologies, these capabilities will drive corporate strategies. "Most CIOs have an innovation goal," he says. "Implement enterprise mash-ups as a way to provide the business with a tool to innovate."

Best Practices

- 1 Establish** a policy that defines IT support for mash-ups and spells out that users must attend training before accessing the tools and applications to build one.
- 2 Don't let** the business sneak in mash-ups. "If you do, you'll be sorry because they'll make a mess and you'll have to clean it up," says Gaultieri. Instead, work with users and have your IT organization take the lead on bringing in mash-ups.
- 3 Use** what you have. Mash-ups depend on the underlying data sources. If you have a service-oriented architecture, the services that make up that architecture are perfect mash-up sources. But be choosy: Expose a minimum number of services to users and keep the interface simple.

The Market for Enterprise Mash-Ups Is Growing

\$39 million

Size of the marketplace for mash-ups in **2007**

\$682 million

Forecast for **2013**

SOURCE: Forrester Research

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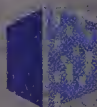
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The 360-degree view of the customer used to be a marketing slogan. But SOA and a better grasp of how to align business with IT are making it a reality.

A New Look at CRM

BY BILL SNYDER

CUSTOMER FOCUS | If customer data is the lifeblood of modern business, Ice.net, a Stockholm provider of mobile access services, was strikingly anemic. The young company was adding customers across Scandinavia at a brisk clip, but its IT infrastructure provided little insight into who those customers were and how they could best be served.

"The definition of a customer can differ quite significantly depending on what department of a company you talk to. It may be something completely different to the logistics department than it is for the sales department," says Thomas Norberg, CIO of Ice.net, formerly known as Nordisk Mobiltelefon in Sweden.

Norberg realized that building systems to enable a unified view of customer data was a critical need. But not so long ago, he and his team would have been out of luck. Building what customer relationship management (CRM) vendors like to call the "360-degree view of the customer" used to be a painstaking process that generally revolved around monolithic products from a single vendor.

What's changed? Ice.net's transformation relied on a number of widely applicable trends and breakthroughs that include the rise of service-oriented architecture (SOA) and the use of shared-information data models. Companies are also learning that the keys to developing a flexible and unified CRM system include mapping IT to business processes and

bringing IT and line-of-business organizations closer.

It's All About the Data

Ice.net had only been providing service for a few months when Norberg joined in early 2007, but its IT infrastructure was already incapable of supporting the young company's growth.

"Even companies with no legacy systems can wind up with data in silos," says Gartner analyst and Vice President Ted Friedman. As a result, "they get the opposite of the 360-degree customer view."

Building what CRM vendors call the "360-degree view of the customer" used to be a painstaking process.

SOA, when empowered with strong data management practices, can enable that 360-degree view since it can breach the walls separating data with reusable services. But Friedman adds that "we see a lot of SOA projects and investments being made without a lot of thought about data. Ask the average [IT] guy what SOA is about and he'll talk about business process and componentizing applications."

Norberg would agree. "The key is to realize that [a modern IT architecture should be] all about information—and how it relates to other information."

Step one in developing a data-oriented approach to the customer is finding a common language. In the last few years, various industries have developed shared information data models, or SIDs, that give exact definitions of categories such as customers or suppliers. Ice.net drew on the work of the TM Forum, which represents companies in telecom, cable, media and the Internet.

Ice.net needed to build its systems architecture around that data model. Norberg choose two products from Progress Software, an enterprise service

bus (ESB) called Progress Sonic, and a data integration tool called Progress DataXtend Semantic Integrator.

Looked at schematically, services such as credit control are plugged into the ESB like Lego blocks, says Norberg. When a new service is ready, the old one is pulled out and replaced. DataXtend is used to create exchange models or mediations between applications and services with different structures and semantics, or definitions.

The first pilot project, integrating the company's online store with the customer and product databases, began

in March 2007, and was rolled out in under four weeks. The company used an agile development methodology to add other segments quickly so that by April of this year, nearly all of Ice.net's departments were able to access clean, consistent data, whether it be related to the customer, order intakes or order fulfillments, in real time.

Align Business With IT

Financial services giant Capital One has approximately 50 million customer accounts, roughly 100 times that of Ice.net, but it faced a similar challenge. Capital One had diversified from its core credit card business and, by the end of 2006, had made several acquisitions, including two banks.

"We really need to know who the customer is across different products and what our relationship is," says Capital One CIO Robert Alexander, who saw that storing data in isolated silos was a business obstacle. First on the list for transformation were online services and e-mail. Customers with multiple Capital One products did not want to navigate multiple websites to transact

business, and the company needed control over the content, volume and intensity of e-mails it sent to customers.

Alexander's team created what he calls "a single point of truth" about customers by linking the data warehouses in each line of business with a unified data warehouse that reflects information from them all. To limit data replication, Capital One selectively pulls the data from the lines of business and adds it to the central, or analytical, warehouse. (Capital One chose not to disclose its technology partners.)

SOA, and its use of standards and reusable services, is a "best practice" that the company has implemented across its IT infrastructure, including the new enterprise customer management team, says Alexander. The team focuses on using technology to enhance customer experience through channels and activities that no single line of business owns, such as Internet marketing and sales, online servicing, customer e-mails, and mobile banking.

What's striking about the transformation is Capital One's move to align business processes with IT. Alexander created a team of representatives from marketing, IT and operations, all of whom ultimately report to him. Why marketing? Their closeness to customers means they are in a position to spell out IT requirements needed to improve customer-related issues, he says.

Creating the single point of truth took about seven months in 2007, as part of an ongoing effort to deliver a new enterprise online servicing platform.

The creation of that "360-degree customer view" is a big step forward for Capital One, as it was for Ice.net. Five years ago, that leap would not have been feasible. It's still difficult, but a new approach to architecture and business alignment are making what was once a marketing slogan a reality.

Bill Snyder is a freelance writer. To comment, go to www.cio.com/article/457927.

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Oracle's Road to Fusion Apps

Why the enterprise apps vendor's next-gen software is delayed

BY THOMAS WAILGUM

ERP | In the world of high-tech product announcements, Jan. 18, 2006, seems like a long time ago. On that date, Oracle executives, including President Charles Phillips, boasted that they were halfway through the Oracle Fusion Applications development process.

Fusion Apps was pitched as a killer enterprise application suite: a combination of the best features and functionalities taken from Oracle's expansive E-Business Suite, JD Edwards, PeopleSoft and Siebel product lines.

Oracle's master plan, noted Phillips, was to "be the first company on the planet to build a full suite of applications for large and small companies based on standards."

Almost three years later, the planet is still waiting. Was Oracle too ambitious on a technology level? "The delay is not surprising given the scope of what Oracle is attempting to undertake with Fusion Apps," says Dwight Davis, a VP at Ovum Summit, a market research company. "It's not just SOA, it's Web 2.0 integrating business intelligence as sort of a pervasive element of Fusion Apps. They're making a clear shift from siloed applications to focusing on more end-to-end business processes that flow across the modules."

In addition to the technical complexities of the last few years, two notable Oracle executives have left, casting a dark cloud over the project. SVP of Oracle applications John Wookey departed in October 2007, and Jesper Andersen—known internally as "Mr. Fusion"—exited in late summer 2008.

"The delay is not surprising given the scope of what Oracle is attempting to undertake with Fusion Apps."

—Dwight Davis, VP, Ovum Summit

But some analysts say Oracle has been all talk, no action. "This was bigger than Oracle thought in the first place," says Yvonne Genovese, a VP and analyst at Gartner. The fact that Oracle has acquired dozens of vendors' products over the years and wants to include some of those in the Fusion Apps makes finishing the job more complicated.

What's the Holdup?

Speculation as to why the suite hasn't been released abounds, mostly because Oracle executives have been so tight-lipped for so long. At the OpenWorld 2008 show in September, for instance, CEO Larry Ellison spent hardly any time discussing it.

However, Steve Miranda, Oracle's SVP of application development, told IDG News (a sister company to *CIO*) that the first suite of products might be available in 2010. "We're going to be with early customers at the end of next year and be very, very cautious on the [general availability date]," Miranda said. "We're going to make sure [the applications] are successful. Period."

According to Ray Wang, VP and principal analyst at Forrester Research, a large part of the delay stems from improved quality control and focused

user acceptance testing. At OpenWorld, Miranda said 700 customers, including Coca-Cola, FedEx and Target, had been participating in Fusion Apps research.

A Game Changer, Maybe

The delivery approach for Fusion Apps will be a phased unveiling like those for project management, business intelligence and supply-chain management, say Oracle execs. In the end, however, some analysts believe that when Oracle does deliver, it could change the landscape of enterprise software.

"Should [they] succeed, they'll create a significant gap in the enterprise applications space," says Wang. The thoughtfulness in how information is consumed and delivered is significant."

Gartner's Genovese remains unconvinced. "The product, when delivered, will be very generic," she says. "It might cause some excitement in the beginning, but it is going to be hard for customers to justify a completely new product that doesn't provide business-based ROI over their current solutions." **CIO**

Senior Editor Thomas Wailgum can be reached at twailgum@cio.com. To read a longer version of this story, go to www.cio.com/article/452717.

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It's Time to Change Your Investment Culture

CIOs are well-positioned to help companies take better advantage of all investments, not just IT

Success in exploiting technology is rooted in a company's investment culture. The more mature this culture, the more value everyone will see from investing in change and IT. The opposite is also true. Executives that are unhappy or unsure about the value coming from the changes they are investing in need some cultural leadership. As the old IT strategy evolves into the corporate strategy for investing in

change, up steps the CIO.

In response to long-standing concerns about the costs and value of IT, IT service delivery has matured. Supply-side IT culture is now much more mature than that of many of its customers. Ongoing innovations and improvements in the design and delivery of IT tools are often unmatched by the exploitation of those tools once delivered. As an illustration, Gartner recently noted about business intelligence technology: "after years of investment and implementation...no more than 20 percent of business users actually use BI proactively." In such instances, the delivery of IT has not been integral to a successful investment in business change.

Now it's time for CIOs and their executive colleagues to switch focus, from culture change in IT to the investment culture of the business as a whole.

For companies that succeed at integrating IT with all business investment decisions, the benefits will extend beyond better IT decision making.

Culturally, many companies still misunderstand deeply the linkages between spending money on IT and creating value by investing in change. Such misunderstandings reach all the way to the top. As the *Financial Times* astutely observed back in 2005, "Boards have clamped down on IT spending because of dissatisfaction about the results, as investments fail to deliver on their promise." Now, as boards face up to today's economic challenges, there's every indication they are doing the same again. Yet the business changes that mean investments deliver on their promise happen outside of IT, and a clampdown on IT spending does not make those changes any more

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likely to happen.

Change the Business Culture

A company's culture is powerful, deep-rooted and potentially ruthless. For those who challenge an incumbent culture, the battle scars are many, but the outcome can be worth it.

There may be nothing more rewarding for a corporate strategist than seeing people release themselves from cultural constraints and achieve more of their true potential both as individuals and as a business.

Most CIOs have already taken one or more IT departments through a culture change. They are equipped better than many for leading culture change in the wider company, but need to be aware of some differences. Culture change in IT has typically focused on service delivery and business operations, whereas the CIO's role is evolving into investment management and corporate strategy. It is also very different to lead culture change in your own department with like-minded external suppliers, than it is collaborating in an interdependent network of culture changes across the business as a whole.

It is essential that a CIO, leading a strategy about investing in change, coordinates her tactics with other executives. There's a high risk of unplanned conflict between them, and if it erupts, they will end up battling each other while the corporate culture watches, metaphorically, from the sidelines. Also, the executive-level culture may need to change first, and collaboration is one of the CIO's options for achieving this.

Thankfully, the CIO's strategy only needs to work on some dimensions of the corporate investment culture, not change

the entire culture. So the CIO's first step is to pinpoint the specific cultural dimensions that her strategy needs to change or preserve.

For example, what is

the predominant focus of the company's innovations? What drives the current strategy for investing in change? How are investment initiatives targeted? How prominently does the exploitation of changes figure in the culture? I use a one-page diagnosis exercise with 10 such questions and four possible answers to each one. After no more than an hour, we have a view of the investment culture that can be verified and then used to set tactics.

Where Companies Need Fixing

Having worked this through with many organizations, some patterns are apparent. It's common for a company to consider carefully the value of an investment (whether in IT or some-

It seems rare to find a company where the exploitation of change is center stage. The main focus is on making changes happen on time, to scope and within budget.

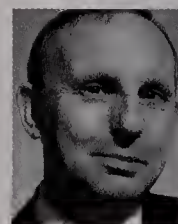
thing else) at the beginning of the process, in a business case, then let the focus slip thereafter. Even companies with benefits realization in place at the end of the investment process often lose focus on value between investment approval and implementation. By the time changes are delivered, there's no guarantee that the original benefits can still be achieved, or even that the change is still worth making.

Another striking feature of many companies' cultures is the assumption, evident both in the investment portfolio and individual initiatives, that every change will deliver the value in its proposal. Yet a proportion of investments are bound to fail. This can be because assumptions in the proposal turn out to be flawed, the business context has changed, or it becomes clear that the company will not know how to exploit the changes once they have been made. In some companies, it can be taboo for a project manager to report that a change is not going to deliver its expected value after all, and recommend stopping the investment.

At the moment it seems rare to find a company where the exploitation of change is center stage. It is a support act at best, with the main focus on making changes happen on time, to scope and within budget. While many companies have benefits realization as the final stage in their investment process, especially when IT is involved, few have made the exploitation of change a systemic part of managing business as usual. Only when they do will they see the true value of the investments they are making, whether these involve IT or not.

The next level contribution of the CIO beckons. Having changed the culture in IT, it's now time to develop the corporate culture to fully exploit the technology and everything else that the company invests in. It won't be easy. The existing culture will drive you to behave in a way that preserves the status quo, or even take you down. But with the right strategy, you can change it for the better. And then you will be ready to move on and do it all again. Or something even more rewarding. **CIO**

Chris Potts is corporate IT strategist and CIO futurist with consultancy Dominic Barrow. He is the author of *FruITion: Creating the Ultimate Corporate Strategy for Information Technology*. Reach him at cdpotts@dominicbarrow.com. To comment on this article go to www.cio.com/article/457917.



More About Investment Culture

Chris Potts writes about **TOOLS FOR LEADING BUSINESS CHANGE** at www.cio.com/article/437569.

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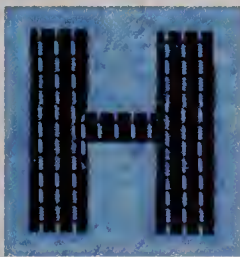
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HOW WE MISS THE QUAIN T TIMES

when text was just a quick way to chat with buddies. Today, these fleeting missives, now integral to so many work lives, amount to a multimillion-dollar corporate risk. Organizations sit largely unprepared while text messages replace e-mail as the digital smoking gun.

You know how it goes: On mobile devices, employees peck out details of their private lives, remarks about colleagues and, inadvertently or not, confidential business information. Things people would never say out loud or in memos fly around in text, often memorialized in digi-

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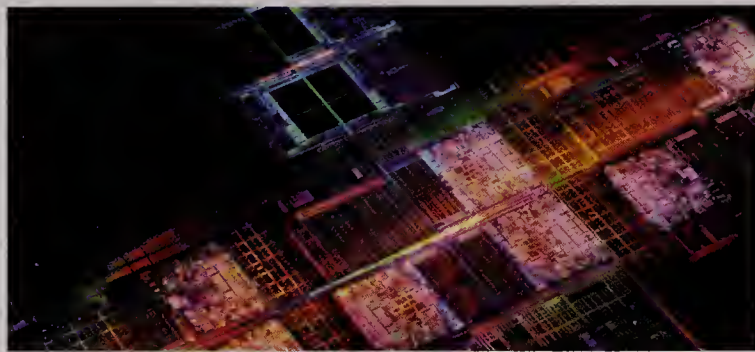
BY KIM S. NASH

Intel IT evaluates two- and four-socket server virtualization platforms including the new Intel® Xeon® 7400 series processor

Virtualization Test

Executive Summary

Four-socket servers based on Intel® Xeon® processor 7400 series can offer significant advantages and lower TCO in multiple virtualization deployment scenarios.



WITH PROMISES OF higher performance and power (consumption) efficiency, targeted specifically to today's virtualized system environment the new Intel® Xeon® processor 7400 series—code name Dunnington—was put to the test by Intel IT and Intel's Digital Enterprise Group (DEG).

The results: Four-socket servers based on Intel Xeon processor X7460 with Intel® 45nm Hi-K process technology and 6 cores delivered 2.16x the throughput of a two-socket server based on Quad-Core Intel Xeon processor X5460, at lower processor utilization.

"Performance overall is very important," says Tom Kilroy, general manager of Intel's DEG. "This platform does a lot of hosting for virtualization in the enterprise, and in the two primary metrics [performance and power consumption efficiency] we're doing very well."

This article will summarize the overall results, and give a snapshot of results under some of the scenarios. For a look at the comprehensive test results, go to <http://ipip.intel.com/go/1227/evaluating-two-and-four-socket-server-virtualization-platforms/>.

Business Challenge

Like many IT organizations, at Intel IT we're pursuing server virtualization to reduce costs in areas such as hardware, technical support, and power and cooling.

As part of this strategy, we wanted to analyze different server platforms to compare how they help IT meet the compute requirements of the Intel

business groups we support. These groups of users have a variety of business requirements, resulting in multiple virtualization deployment total cost of ownership (TCO) scenarios. We have classified these scenarios into three broad groups:

- **Performance-centric SLA-focused.** These scenarios emphasize the need to meet performance service-level agreements (SLAs) based on response time or application throughput. Examples include end-of-quarter financial processing, trading applications, and engineering design workloads.
- **Memory capacity-focused.** These scenarios focus on provisioning large numbers of virtual machines (VMs) as cost-effectively as possible; performance is secondary. Typically, this means maximizing consolidation ratios. Examples may include VMs used for development, testing, and demonstration, and lightly loaded production applications.
- **VMs per host limited by business policy or IT environment.** In these scenarios, external constraints such as risk management concerns or network infrastructure limitations restrict the number of VMs per physical server. As a result, the load on each physical server is relatively low.

Intel IT evaluated server platforms based on Intel Xeon processors to determine which delivers the best TCO for each scenario. Our goal is to meet the needs of business groups in the most cost-effective way.

Test Results

In our tests, the four-socket server based on Intel Xeon processor X7460 was considerably more scalable than any of the other platforms, delivering


FIGURE 1. Virtualization platform comparison summary. Blue indicates top score

Optimization Goal	Deployment Scenario	Intel Xeon Processor 5300 Series	Intel Xeon Processor 5400 Series	Intel Xeon Processor 7300 Series	Intel Xeon Processor 7400 Series
VMs for Lowest Total Cost of Ownership (TCO)	Performance-centric	1.00	1.35	1.06	1.34
	Memory capacity-focused	1.00	1.01	1.82	1.74
	Balanced (performance and memory)	1.00	1.16	1.34	1.51
	VMs per host limited by business policy or IT environment	High	High		
VMs per Cluster (Resource Pool Scaling)	Performance-centric	1.00	1.33	2.06	2.86
	Memory capacity-focused	1.00	1.00	4.00	4.00
VMs per Watt (Data Center Power-constrained)	Performance-centric	1.00	1.44	1.06	1.38
	Memory capacity-focused	1.00	1.08	1.67	1.74
VMs per LAN or SAN Port (Data Center LAN or SAN Port-constrained)	Performance-centric	1.00	1.33	2.06	2.86
	Memory capacity-focused	1.00	1.00	4.00	4.00

Summary data based on TCO assumptions as described and Intel internal measurements, August 2008.

much greater aggregate throughput at lower utilization levels. Aggregate throughput on the server based on Intel Xeon processor X7460 continued to increase as we increased the number of CSUs to six. As a result, the server achieved a maximum throughput that was 2.16x the maximum throughput of the server based on Intel Xeon processor X5460, with lower utilization.

TCO Analysis

We used our virtualization test results to calculate TCO for the two- and four-socket servers in each of our deployment scenarios. Each of our three distinct virtualization deployment TCO scenarios reflects a unique set of business requirements. Based on our test results and assumptions, we estimated TCO for each platform when supporting each scenario.

For example, in a performance-centric, SLA-focused scenario, the server based on Intel Xeon processor X7460 supported about 26 percent more VMs for the same TCO, due to its increased throughput, lower power consumption, and greater performance per watt. And the servers based on 45-nm technology delivered the best TCO for our performance-centric scenarios.

In the memory capacity-focused, scenario, we found that the four-socket servers delivered the best TCO because of their 4x greater memory capacity, which allowed correspondingly larger consolidation ratios. The four-socket servers based on Intel Xeon processor X7460 could support 72 percent more VMs than the Intel Xeon processor X5460-based server for the same TCO.

Conclusion

Four-socket servers based on Intel Xeon processor 7400 series offered significant advantages over other server platforms in almost all the virtualization deployment scenarios that we studied as part of our proof of concept. The scenarios are summarized in the chart above. ■

Sudip Chahal is a compute and storage architect with Intel Information Technology. **Raghu Yeluri** is an enterprise architect with Intel Digital Enterprise Group, End User Platform Integration.

➤ To download the complete article featured in *Intel Premier IT* magazine, go to <http://ipip.intel.com/go/1393/virtualization-test/>.

➤ For the full test report, go to <http://ipip.intel.com/go/1227/evaluating-two-and-four-socket-server-virtualization-platforms/>.



Dean Foods CIO Art Fino must consider how much it will cost to have telecommunications vendors or a storage service company archive text messages in a way that's searchable later.

tal archives that you don't control. It's juice for a legal adversary.

Text messages about employee firings and extramarital sex recently brought down Detroit Mayor Kwame Kilpatrick and his chief of staff, Christine Beatty.

Last year, three police officers sued the city and the mayor for wrongful termination, claiming they were whistleblowers who had been retaliated against for discussing possible misconduct in Kilpatrick's administration. During the

case, Beatty testified that one officer, Gary Brown, "was not fired." But text messages subpoenaed from SkyTel, which provides pagers to the city, said otherwise.

"I'm sorry that we are going through this mess because of a decision that we made to fire Gary Brown," read one of Beatty's texts to Kilpatrick, with whom, as other messages revealed, she was having an affair.

The officers won the case and \$8 million. The city executives lost their jobs; Beatty resigned in January and Kilpatrick in September. In October, Kilpatrick was

Optimize your BI INVESTMENT

A CIO dialogue on BI strategy

CIO Publisher Emeritus Gary Beach recently met with four IT leaders to discuss leveraging the power of business intelligence software to help their companies operate more efficiently and lower the cost of doing business. Joining the discussion were:

*Bruce Metz, CIO,
Thomas Jefferson
University;*

*Don Sturdivant,
Senior Vice President and
Chief Technology Officer,
Square 1 Bank;*

*Tim Fleming,
Vice President for
Information Technology,
Ingersoll-Rand;*

*Ian Gordon,
Director of Global
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for Business Intelligence,
Cognos, an IBM company.*

Following is an excerpt from their discussion. What are the key elements of BI success? As these IT executives know and share, it's about having access to the right data, implementing the right architecture, and supporting employees as they adjust to a shift in culture and processes. Following is an excerpt from their discussion. The full webcast is available at www.cio.com/webcasts/sponsored/cognos.

GARY BEACH: What are some of the cultural challenges and obstacles that CIOs might face as they embark on a BI project and are asking people to change the way they work?

BRUCE METZ: When we approached using business intelligence more in the information delivery to get access to data, there wasn't as much of a push for cultural changes. But when we started to think of it as a more strategic undertaking, that's where we got into that people needed to work together across previous silos and all the islands of information. We not only focused on the architecture and data issues, but also on making sure there's executive sponsorship from the top levels of the campus and that there's a governance structure in place, both in terms of the functional and business areas and the technical areas.

BEACH: Users are critical—what did you do before, during, after, and ongoing to keep users engaged and using the software?

TIM FLEMING: Tactically speaking, we bound the time frame. We said we were going to go

from zero to BI in 100 days. That fundamentally set some ground rules for our user community. They were going to have to prioritize what was important to them. It crystallized the team to come together so both the business community and the IT community were able to deliver in that time frame. We followed it up with the concept of a delivery every quarter, so the user community has become our biggest marketer and advertiser. They hear about it from some of their colleagues in their functional area, and they want to know, 'how do you do a drill down like that? That information's incredible!'

BEACH: Are the most successful implementations of BI top down, bottom up or somewhere in between?

TIM FLEMING: I think today it's starting out as a bottom-line enabler because of the functional areas we've chosen to target. Now we can go and compare the information against the general ledger. Whereas previously it would take four to five days to close books before they could begin analyzing what the activities and opportunities were missed, they're now doing it in hours. One of our financial controllers came to me the other day and said, 'I'm actually asking the teams to reconcile daily now.'

DON STURDIVANT: I would say since it's brand new to us and [because of] the unique nature of the industry I'm in, it's definitely bottom up. We provide banking services, but we make our money on our loans. And as ev-



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"As you think to the future from a sustainability standpoint, how do you get the data to keep track with the users that continuously change? I can't tell you the number of data warehouses that we've sunset, just because they died on the vine with an individual."

—Tim Fleming,
Ingersoll-Rand

everyone knows, it's a very tight credit market out there and so we need to have visibility into our risk exposure. So particularly in our bank, since we focus on venture-backed startups, which already have a built-in risk component to them, we have to make sure we really understand if a sector or a technology is going south. We need to have an awareness of where our risk exposure is to see what allocations we have to make, or do we have to change our loan loss reserves, those kinds of things. Eventually it will be top line.

BEACH: If you went back to before you started doing some BI, what were some of the unexpected speed bumps and what advice would you give to navigate around those?

METZ: One in particular is this is only as good as the quality of the data, and when you start to try to integrate the data and as you mentioned, combining the silos, then you're going to find problems that there was no way you knew existed otherwise. And even though we're talking about the people, the process, and the culture changes are by

FLEMING: Sustainability is the most difficult thing. Manufacturing companies tend to grow by acquisition, so any CIO could have had a great strategy in place, and all of a sudden he's got three new companies with three new systems—none of them talking the same language. You've got to figure out how to keep them not just alive, but effective for you. As you think to the future from a sustainability standpoint, how do you get the data to keep track with the users that continuously change? I can't tell you the number of data warehouses that we've sunset, just because they died on the vine with an individual.

BEACH: What's the horse and what's the cart in a successful BI implementation? Is it people or the data?

FLEMING: You bring up a very interesting point because I probably would preach data, data, data over the course of my career. But over the past couple of years, I think I'm beginning to morph into an understanding, both due to change management as well as the things that we're seeing in lack of definitions through different interpretations—how critically important it is to get the people part of this equation figured out. Data's static. People change, and I have to figure out different ways to engage them.

IAN GORDON: I think we've had examples where maybe there's not quite enough attention around the training. You have to train the people or else it just doesn't fly. I think at the same time, some of the other comments around making sure you know the data's good, you need to pay attention to that, too, because the worst thing that can happen is you start off, give somebody a brand new report, [and] they look at it and say, 'I don't believe that.' You need to balance the people with the data being right.



From left, Bruce Metz, CIO, Thomas Jefferson University; Don Sturdivant, SVP/CTO, Square 1 Bank; Tim Fleming, VP/IT, Ingersoll Rand; Ian Gordon, Director, Global Product Marketing for Business Intelligence, Cognos; and Gary Beach, Publisher Emeritus, CIO magazine.

far the more significant, I would say at the beginning, we're probably spending more time and effort and resources on all of the architecture and data issues.



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Corporations are just as vulnerable. When all 100 of the Fortune 100 are involved in legal proceedings, you know you probably can't avoid e-discovery at some point in your career. And when

your company gets hit with a lawsuit, you'll likely have to retrieve and reveal employee text messages relevant to the case, along with other newer forms of communication, such as instant messages and the words, pictures and video

from social networking sites, blogs and wikis. But the way some CIOs are managing these technologies—sometimes by not managing them at all—makes that task harder and more expensive than it should be, says Alan Brill, senior managing director at Kroll Ontrack, where he founded the computer forensics and computer security functions.

CIOs dealing with e-discovery in a Web 2.0 world must learn new ways to limit the cost, business disruption, legal liability and potential public embarrassment from what employees say and where they say it. You have to plan for how you will collect data when you don't control it, whether it be text messages stored on the servers of your wireless provider or data in hosted applications from a software-as-a-service vendor. Even systems you may control contain information that may not be managed at present: unified communications systems that combine messaging, voice and video must also be brought into your record-keeping process.

So far, to his knowledge, no major corporate lawsuits involving evidence from social networking sites have emerged, notes Kroll's Brill. However, as in the case against the Detroit mayor, text messages are showing up in court, and these cases give us a taste of what's coming in e-discovery. "I worry about the CIOs," he says, "who don't even recognize the danger."

Think of the legal implications of, say, a Twitter post like this, from a proud employee: "To you naysayers, our disc brakes are fine. I'm an engineer on that product. We test to 5x tolerance on the label, so you can be rougher on them than you think. Don't worry." You've got potential product liability in 140 characters, warns Tom Mighell, a lawyer and senior manager at Fios, an electronic discovery consulting firm.

Rules? What Rules?

Since the late 1990s, arguments about whether and how electronic evidence should be produced have regularly bogged down civil lawsuits and IT departments alike. Broad discovery demands for, say, five years' worth of e-mail for dozens

Managing the Social Networking Data Sieve

Four steps to containing the legal risks of social sites

Twitter, Facebook, LinkedIn and other social networking sites practically beg you to reveal even more information about yourself. Log on and you're asked: What are you doing? What are you doing right now? What are you working on? Whether they mean to or not, any of your employees active on these sites can give away company secrets as easily as they do personal ones, 150-odd characters at a time.

For CIOs trying to get a grip on social networking by employees, Tom Mighell, a lawyer and senior manager at Fios, an electronic-discovery consulting firm, offers some starting points:

1 ACCEPT AND TRAIN. Many employees will use social networking tools regardless of what you want them to do. Instead of trying to stop them, teach them what to say, or what not to say, about work. For example, employees might be tempted to promote the features of a new product. But should that product become the subject of a product liability claim, those statements could be used as damning evidence, Mighell says. Also, they should be clear about which statements are opinion, which are fact. Talk frankly about the legal risks.

2 INFLUENCE THE SOCIALIZING. Show how to use social networking tools productively and creatively for work without giving away too much information. For example, solicit expertise but don't get too specific. Wrong: "About to blow major deadline for Project Anaconda. Any SAP Netweaver experts out there? Help!" Right: "Looking for an SAP Netweaver expert."

3 CONSIDER THE COMPLEXITIES. If information posted on social networking sites becomes relevant in a lawsuit, you will have to collect it, review it and search it so you can comply with discovery requests. That may mean your social-networking employees may have to give up some privacy—their site passwords, for example. This particular situation hasn't yet come up in court, but it could get messy if the employee refuses to cooperate, Mighell notes.

4 MONITOR. Designate a couple of people from the tech or legal groups to do sweeps of Facebook, LinkedIn and other known hang-outs of your employees, to see who's saying and doing what. Talk to those who aren't following policy, and keep records to prove regular monitoring and enforcement of your rules, he says. You can't defend yourself if you set policy but never enforce it.

—K.S.N.

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Owens Corning CIO **David Johns** piloted IM to see how well IT could manage the information.

not before the CIO was deposed by hostile attorneys. The plaintiff got many of the archived messages she demanded. She also got a favorable verdict and \$1.9 million.

Some companies are still winging e-discovery, even two years after amendments were made to address the process in the Federal Rules of Civil Procedure, which are the standards for trying civil lawsuits.

The rules call for the parties in a suit to meet early in the proceedings to disclose the kinds of electronic records available, whether they are “reasonably accessible” and in what time frame. The parties must create a discovery plan for electronically stored information of all sorts, including databases, e-mail, spreadsheets, data published on the Web, as well as text and instant messages.

But when a lawsuit hits, some organizations struggle to answer such questions. Of 60 in-house corporate attorneys surveyed by Océ Business Services, a document management company, just four said their organization is “well prepared” to comply with a discovery request involving both paper and electronic information. Twenty-five of the 60 haven’t implemented an internal e-discovery process. Why? “Too risky,” “too expensive” and “takes too much time away from case- and business-related matters,” respondents said.

Preparing for discovery is time-consuming and it does cost money. But going into court unprepared is more costly, according to the Institute for the Advancement of the American Legal System, a think tank of judges and lawyers.

Some legitimate cases make no financial sense to pursue if you must pay lawyers hundreds of dollars per hour to argue about whether and how to produce data, then pay outside consultants hundreds of thousands of dollars on top of that to get the data in shape for court, said James Bredar, a magistrate judge for the U.S. Dis-

of employees somehow related to a given case are common. Along the way, parties protest what they see as undue burden and the multiple millions of dollars it can cost to retrieve electronic information. Again and again, judges find they must appoint special magistrates to preside over discovery fights before the meat of

the case is tried.

The way one employee discrimination suit, against investment bank WestLB, played out, the parties spent almost three years fighting about the production of text messages and e-mail and just four months on the facts of the case. The suit, filed in 2004, concluded this summer—though

They're not just new forms of data.

strict Court in Maryland, in the institute's recent report urging e-discovery reform. "The just resolution of a dispute has little value to a party if bankruptcy was the price of its achievement," he said.

Even as e-discovery continues to vex, the pace of technology change compounds the issues.

Smoking Gun Versus Private Thought

This year, more than 600 billion wireless text messages will zip through the air worldwide, according to CTIA, an association of wireless technology providers. That's a 10-fold increase from 2005's 57 billion.

Instant messaging, meanwhile, seeps into companies unsanctioned and unpoliced by IT. Social-media technology, too, presents trouble. Facebook, LinkedIn and MySpace, for example, encourage their combined 280 million members to broadcast what they're doing and boy, do they—from work and home, from hotels on public computers, from trains and planes on cell phones. Users of these technologies move fluidly online between the personal and the professional, says Fios's Mighell.

So far, the way text messages are handled in court varies by district and judge. In Michigan, for example, the messages of a city official on a city-issued device are

of their sometimes sexually-explicit chat, conducted on pagers provided by the city. Arch argued that the police department's computer usage, Internet and e-mail policy allows for the monitoring of users' content.

But police department officials didn't regularly monitor pager texts, according to testimony, and officers developed a "reasonable expectation of privacy," the court concluded. Unlike SkyTel in Michigan, Arch in California was wrong to provide the messages. CIOs looking for firm rules across regions about text as evidence are out of luck, says Nolan Goldberg, an intellectual property attorney at Proskauer Rose.

"There's general guidance, but not much case law," Goldberg notes.

Avoidance Won't Work

A CIO's smartest move then, says Kroll's Brill, is to work closely with company lawyers to set and manage employee expectations of privacy. For example, when you install a new technology, amend your existing policy to address it specifically, he advises, even if it is simply by adding the words "text and instant messaging" to the existing passage about e-mail. (See "Managing the Social Networking Data Sieve," Page 34, for tips on containing the risks from social sites.)

ceedings begin, says Steve Wharton, vice president of infrastructure at Dean Foods, a \$12 billion dairy company.

A lawsuit, an inquiry from the U.S. Department of Justice or an audit by a regulatory body such as the Securities and Exchange Commission usually has a deadline attached, Wharton notes. Blowing it can result in fines, as well as ticking off the judge or investigator.

He and CIO Art Fino watch discovery issues closely because, he says, as the biggest milk producer in the United States, Dean Foods receives two or three requests for information each year from the DoJ, which monitors dairy industry competition. "We're organized, yet it's quite a fire drill for 30 to 60 days," Wharton says.

While those inquiries are active, the company must retain all pertinent electronic data and retrieve, sort and search it to respond to DoJ requests. For IM and e-mail, Dean Foods is evaluating several outsourced archiving vendors, including AT&T, Google's Postini service, IBM and USA.net. They store messages by user for a yearly fee, but don't offer sorting and searching for e-discovery. Dean Foods will farm that out to another company when needed. Fino and Wharton haven't addressed wireless text messages yet, but considerations include how much it will cost to have telecommunications vendors or a storage service company archive the messages in a way that's searchable later.

"We've got a pretty good strategy for IM, and mobile will follow," Wharton says.

At building materials manufacturer Owens Corning, the technology department wouldn't sanction IM until this year, waiting for better archiving controls and tools for keyword searches, says David Johns, CIO of the \$5 billion company. "We have our [desktop software] image locked down pretty well, so it was difficult if not impossible to have employees bringing in their own" applications, Johns says. Owens Corning deployed IM in "a small pilot" this year, he adds, to study how it's used and whether IT can control it well enough. Johns says he's satisfied and will consider rolling out IM more widely during the next several months.

"Experience has taught us that if there's an expedient way to further business, it will be done, whether it's condoned or not."

—MICHAEL HARNISH, COO, FIOS

public record, as Detroit's ex-mayor now knows. But in June, judges in a California case concluded the opposite. They found that messages on a city-issued device are protected from an employer, at least when senior managers fail to enforce consistently their own governance policy.

In the 2006 case, police officers in Ontario, Calif., sued the city's pager provider, Arch Wireless, for violating their privacy by giving their bosses transcripts

Next—and don't get lazy about this—maintain a regular schedule of monitoring and keep records to prove you're consistent, he says. "Don't have a de facto policy. Have an affirmative policy," he says. Otherwise, the policy is open to interpretation and you may not get a judge who sees it your way.

From a technology perspective, companies should be ready to produce old text messages and IMs as soon as legal pro-

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Johns is cautious, having lived e-discovery for his 14 years at Owens Corning as the company has navigated at least 2,141 asbestos lawsuits that led it to Chapter 11 bankruptcy protection in 2000. The company emerged in 2006.

Owens Corning has started its share of lawsuits, too, suing test laboratories for providing what it said in financial documents is "questionable medical evidence" in 40,000 individual asbestos cases. The company also sued tobacco firms in an attempt to get them to cover some of the \$10.2 billion owed in damages to asbestos plaintiffs with lung damage.

A CIO must protect the company with policy and technology long before he's called upon to turn over data for a lawsuit, as a matter of best practice, Johns says. He also has outlawed .pst files, which are personal storage tables that users of Microsoft applications can create to, for example, remove data from their mailboxes and out of the sites of any automated deletion programs IT might run. He limits mailbox sizes to 100MB. "With us going through some of the legal challenges we had in the past, that's part of the reason we run things the way we do. It is more straightforward to manage."

Goldberg, the intellectual property attorney at Proskauer Rose, knows of companies that have let IM and other communications technologies creep into corporate use without a formal policy. Other companies don't archive IM consistently, leaving it up to the users to turn on or off that feature at their desktops, he says.

Those are common situations that can lead to coming unprepared to court and risking fines or sanctions. "You have to know where this stuff is and how to retrieve and preserve from the system before a lawsuit arises," he says. "It's too late to figure it out under the heat of litigation."

My Data, Pretty Please?

But that's just it. Locating and getting your own data isn't as simple as it used to be.

Some of the familiar techniques for making regular e-mail discovery-ready don't translate. With e-mail, for example, you can set servers to archive a snapshot

Preparing for discovery is time-consuming and it costs money. But going into court unprepared is more costly. "The just resolution of a dispute has little value to a party if bankruptcy was the price of its achievement."

—JAMES BREDAR, MAGISTRATE JUDGE,
U.S. DISTRICT COURT

of all employee accounts on a given day, at a given time, and save it for X-number of days. E-mail administrators can then move a designated snapshot to backup tapes and delete the rest. You can't do that with text messages because your wireless provider controls that data, not you. CIOs have to understand the vendor's retention and deletion policy and negotiate something different, if necessary.

Putting data in the hands of third parties this way adds a layer of complexity and expense to discovery that e-mail evidence doesn't usually entail. There are only two ways you can get that data back: ask for it or subpoena it. Which way it goes depends on what your contract says.

It's a best practice for a contract to specify which company controls the data, regardless of who stores it, Goldberg says. Ideally, the third party will comply with your data retention and destruction schedules, but that's something you must negotiate and, depending on how complex the rules are, pay extra to get. An individual text message is small. But a few thousand employees traveling with BlackBerrys can produce heavy and expensive volumes. "Do some cost shopping," he advises.

Prohibiting a particular Web 2.0 technology may not work because people will find a way to use it anyway, says Michael Harnish, chief technology officer of Fios and former CIO at the law firm Dickinson Wright.

"Experience has taught us that if there's

an expedient way to further business, it will be done," he says, "whether it's condoned or not condoned."

With texting, Harnish says, if you equip employees with cell phones that block data, they will use their own. With IM, if you close the software ports used by AOL's AIM and Microsoft's MSN Web Messenger, employees can try Google Talk, Meebo, Skype, Yahoo Messenger and a list of other services. Or they might simply conduct company business on personal accounts. Sarah Palin did it. The Alaska governor and Republican candidate for vice president conducted state business on a personal Yahoo Mail account and is being sued by a political activist to reveal 1,100 messages withheld in a public records request.

Harnish says the key lesson for CIOs who pay attention to how text messages are fairing in the courts is this: Don't pretend employees aren't using text for business or in ways that could harm the business. Learn what employees are doing and get ahead of them, he says. Write a policy and train them on the practices and methods acceptable.

That awareness is critical, he says. When litigation starts, you'll have a much more detailed picture of the ground you'll have to cover to comply with e-discovery requests, saving time and money.

Fino, the CIO at Dean Foods, cautions fellow CIOs: "If we were thinking that the urgency of discovery would go away, we were mistaken. This will be the norm for a good, long time." **CIO**

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SaaS and the IT Staff

As software moves to the Web, your staff is going to follow. Here's what the shift may mean for your IT department. **BY C.G. LYNCH**

Reader ROI

- ⌘ How SaaS is changing IT jobs
- ⌘ Skills IT professionals will need
- ⌘ What it all means for corporate technology organizations

Tom Clement has reinvented his career before. In 1984, he realized that working in technology would suit him better than his job as a litigator in Texas. "I came home one day from work, and I was used to being really tense," he says. "But that day, my secretary's recorder had broken. I'd taken it apart, put it back together and somehow, it worked. I was whistling and in a good mood because of it, and my girlfriend heard me and said, 'Tom, maybe you were made for a different line of work.'"

After moving to California and taking a night class at the University of California, Berkeley, in C-programming, he put his law ambitions aside and took a job at a C-compiler company, taking pieces of code and translating it into a language that could work on Motorola hardware.

Today, Clement, a senior developer at Serena Software, might be facing a bigger career test: software as a service (SaaS), the movement of software to the Web. SaaS, one flavor of today's hot buzzword, cloud computing, refers to applications that users access over the Web and which live on physical serv-

ers hosted by the software vendors or a third party, not servers owned and cared for by an in-house IT department.

Today, most large companies use a mix of both traditional apps that they run on premise and some that are hosted offsite, such as Salesforce.com's sales and CRM-related apps. Enterprise adoption of SaaS applications has been aggressive. According to a CIO.com survey on cloud computing, 84 percent of respondents are currently running SaaS-type applications. Meanwhile, a survey published earlier this year by Kelton research found that 73 percent of

large companies have already or plan to adopt SaaS technology in the next 18 months.

A shift away from on-premise apps has implications for how companies staff their IT departments in the future, according to CIOs and IT industry executives. Change is afoot for developers as well as the thousands of IT support and maintenance professionals taking care of traditional software at companies of all sizes, in all industries.

Case in point: Tim Davis, CIO of Popeyes Louisiana Kitchen, a national fast food chain based in Atlanta, only has six IT people on staff and not one production server on premise. With no production servers or apps to run, says Davis, "Three [people] are dedicated to making sure the restaurants have whatever technology they need. The rest are project managers and manage our relationships with vendors."

Vendors See a Radical Shift

In the future, say vendors, more IT professionals will be working for them, not for CIOs at end-user companies. And they'll all need new skills. That goes for developers as well as support staff.

Developers have been through big transitions in computing before (remember the move from mainframe computers to the PC?). Within the IT industry, vendors are preparing for a new round of upheaval as CIOs roll out offerings from the likes of Google (with its Google Apps) and Salesforce

How Fast Is the Road to SaaS?



Vendor would make it easier to migrate apps to hosted model

How quickly can the software industry migrate to a SaaS model? Managed hosting provider Savvis has rolled out a service that it hopes will speed up the process by helping independent software vendors offer their applications as a hosted service.

The service allows software vendors to take a single-tenant application and offer it as a hosted service to multiple clients, says CTO Bryan Doerr. It is available first in the United States and the United Kingdom, and will be offered worldwide by the end of the year.

Savvis partnered with Parallels to use its Virtuozzo Containers virtualization software to offer the service. The product divides a server OS into individual containers, each of which is assigned to a vendor customer and hosts multiple instances of its application. Customers also use Parallels' Automation software for provisioning accounts, billing and linking to payment systems.

More and more end customers are turning to SaaS to reduce costs, putting pressure on software vendors to offer their applications as services. Customer relationship management has seen the widest uptake, with 15 percent of software revenue in 2007 coming from SaaS applications, according to Gartner. The fastest growing segments are for office suites and digital content creation tools, where SaaS revenue will roughly double on average each year from 2007 to 2011, Gartner says.

Some vendors have developed multitenant versions of their applications, which allow multiple end users to access a single instance of their software. Savvis hosts applications for some of those vendors, but the new service is for vendors that have yet to develop multitenant products. They don't need to rewrite applications to use the service, according to Doerr, and need only to bring it in and test it in the SaaS environment. "We think [vendors] will use this as a quick go-to-market [option] and eventually rewrite their application to be natively multitenant," Doerr says.

Savvis competes with other managed hosting providers such as AT&T and Terremark, SaaS hosting specialists such as OpSource and platform providers such as Salesforce.com and Microsoft.

—James Niccolai



Customer Intimacy

Survival tips for surviving and flourishing in a tough economy.

Dan Fregeau

VICE PRESIDENT, CUSTOMER LIFECYCLE MANAGEMENT,
EMC CONTENT MANAGEMENT AND ARCHIVING

Before coming to EMC, Fregeau was the executive vice president and cofounder of recently acquired Document Sciences Corp. He has over 25 years of experience in personalized customer communications technology and solutions.

In these uncertain economic times, many customer interactions are falling short, says Dan Fregeau, vice president of Customer Lifecycle Management for EMC's Content Management and Archiving group. More companies should shift their focus from acquiring new customers to keeping the best and most profitable. The resulting customer intimacy drives wallet share and lifetime value. Read on for more insight from Fregeau.

How are customer communications evolving?

Communications are becoming increasingly personalized, tailored to be more relevant, impactful and persuasive. This is made possible by continuously improving customer data and by increasing interactivity—that is, asking customers to provide the data companies need to return a more personalized offer or information packet. Additionally, more

buying histories and any other relevant data—is paramount to personalizing communications. It's also important to empower marketing with the technologies it needs to leverage data to improve the customer experience across multiple channels. This requires cooperation between IT and marketing like never before. But it can be facilitated by an underlying content management infrastructure that transforms raw data from IT into meaningful customer communications.

How important is the underpinning enterprise content management (ECM) platform?

Not only does the platform enable management of far more content but it also does it according to strict corporate policies and regulations. Otherwise, CIOs can face undesirable financial and legal exposures resulting from offers that are not profitable or perhaps violate laws.

"I think the next leaders will be the CIOs who master the customer intimacy puzzle, making customers stickier and gaining referenceability to reap the many rewards."

customers are looking to access information through multiple channels. So there is a much greater emphasis on electronic media—from e-mail and web sites to mobile devices—and companies need to deliver these communications accordingly.

What do CIOs need to be cognizant of as they traverse this evolution?

Management of customer-centric data is clearly very critical. Information about customers—such as their preferences,

ing investments. It transforms BI data into personalized content to improve the customer experience. And the results of improved communications can be monitored through CRM, providing the feedback necessary to iterate and further improve the assembly of content and build stronger customer relationships. In many respects, ECM is the missing ingredient of many CRM and BI initiatives.

What is the value of ECM to the CIO?

Ultimately, the CIO will enable marketing to dramatically improve the customer experience, which influences how much customers will spend. Many companies spend enormous amounts of money to acquire unprofitable customers. They've become very efficient at losing money. But customers will spend more money for a better customer experience, so shifting emphasis toward loyalty can maximize revenue and reduce drop-off rates. I think the next leaders will be the CIOs who master the customer intimacy puzzle, making customers stickier and gaining referenceability to reap the many rewards.

FOR MORE INFORMATION: Check out the white paper **"The Customer Communications Management Platform—Key Functionality and Best Practices"** at www.cio.com/whitepapers/emc/customerintimacy

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Custom Solutions Group

The content management platform can also maintain brand consistently across channels and generate communications in multiple languages with the control to create and revise content for personalized permutations. Trying to do all of this without a strong content management platform is pretty difficult.

How does content management complement applications like CRM and BI?

ECM is a natural extension to these exist-

.com that let users run applications via the Internet. Zoho, a SaaS vendor that does most of its development work in India, offers a plethora of applications, including word processing, spreadsheet and presentation software.

Along with the consumerization of IT—the idea that people expect applications at work to look like the Web technologies they use at home (such as Facebook and Google)—the SaaS trend will force many IT professionals to rethink their skills and the value they bring to their companies, says Jeffrey Kaplan, president of THINKstrategies, a consultancy that helps companies adopt SaaS applications.

“Unfortunately, most developers have built enterprise applications to meet their current systems environment and the end user was very secondary,” Kaplan says. “Now, the end-user experience is the driving factor, because end users determine whether or not the application is considered successful.”

In addition, maintenance veterans who handle the plumbing of IT could see their job options start to recede as maintenance responsibility shifts to the vendors who supply the applications. That reality can be both a challenge and an opportunity for the IT industry, says Peter Coffee, director of platform

research at Salesforce.com.

“If you’re in the ecosystem of working on staple, on-premise software, you can take care of feeding and watering those systems,” Coffee says. But in a SaaS-based world, “those low-value tasks no longer need to be done [onsite],” he continues. Instead, he adds, you’ll want your IT staff “to be the IT equivalent of special forces.”

Ken Venner, senior VP and corporate services CIO at communications semiconductor company Broadcom, says such IT special forces might build new features that fit a company’s specific needs on top of SaaS apps, or manage the relationships between two or more SaaS vendors who each provide technology to the same company, making sure their systems talk well with one another. “Working with vendors will really become ever more critical,” Venner says. “One of the skills that will start to reduce is core infrastructure skills.”

The Post-Modern IT Department

At Popeyes, the idea of a SaaS-driven, plug-and-play IT department is more than a dream. Today, says Davis, not all of his apps are SaaS-based. A SaaS vendor, by his definition, is a company that

Who You Gonna Hire?

The hottest jobs in IT are for business, architecture and policy experts

A recent report by Forrester Research says the hottest corporate IT jobs are focused on enterprise-level management and vendor oversight. But the emergence of software as a service (SaaS) probably won’t be a significant factor in how IT organizations are designed for at least five years, says Marc Cecere, Forrester vice president and principal analyst.

Cecere asked nine colleagues to name the hottest roles within the areas they follow. The report ranks 16 roles according to five “drivers of heat,” including the business- and technology-specific knowledge required for each role, the level of risk and impact on the business associated with it, the likelihood the role could be outsourced and its consistency with technology, vendor or industry direction.

SaaS “never comes up as much of a factor with CIOs when talking about the design of IT,” says Cecere, although the trend may figure in elsewhere such as through a greater



reliance on vendors or focus on processes that influences demand for certain roles.

The hottest roles, according to the report, are policy- and security-oriented positions: information and data architects, along with information security experts.

Business analysts, business architects, enterprise architects and vendor management experts—roles focused on information management, process management and vendor

oversight—come next. Then come traditional roles that have been expanded in scope: enterprise applications strategists, IT planners, network architects and enterprise project managers.

Finally, technology-specific roles that are in demand include account managers (who interact with business users on specific projects), desktop virtualization experts, mobile technology experts, service managers, business process analysts and storage directors.

—Elana Varon

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Popeyes Louisiana Kitchen only has six IT people on staff and not one production server on premise. "Three [people] are dedicated to making sure the restaurants have whatever technology they need. The rest are project managers and manage our relationships with vendors."

-TIM DAVIS, CIO

provides the software over the Web, hosts it and charges a subscription fee (generally per user per month). Popeyes owns the licenses for some of its software, and worked out a contract with IBM to host and support the servers for those apps. The contract includes IBM's hosting of Popeyes' Microsoft Exchange e-mail system along with its Lawson ERP system, although the ERP app is managed by a business process outsourcing vendor, Convergys, which performs Popeyes' accounting.

The three developers on Davis's team who work on restaurant technology support the company's point-of-sale system and are currently leading the search for standard POS systems to be implemented

by franchisees. (See "Who You Gonna Hire?" Page 46 for more on currently hot IT roles.)

Davis notes that his contract with IBM will expire in 2009. When that happens, Davis admits he could pursue more SaaS options, as these would likely cost him less money than outsourcing to Big Blue. Microsoft recently released a SaaS version of Exchange for a mere \$10 per user per year. Other SaaS applications Davis is eyeing include ERP, an intranet and extranet, and CRM.

But how quickly SaaS might change the staffing landscape for many companies is another story. A recent report by Gartner, for example, throws cold water on the concept of ERP as a hosted application.




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"Because of the complexity of ERP suites, SaaS offerings for administrative and operational functions typically have provided functionality that is confined to one domain, such as sales-force automation or one business process, such as payroll," writes Gartner analyst Denise Ganly. She says it will be five years before SaaS ERP suites are viable options for large enterprises. (For more about vendor migration to the SaaS model, see, "How Fast is the Road to SaaS?" Page 44.)

When it comes to SaaS ERP, Ganly continues, a big driver is the IT staff constraints faced by many organizations. The SaaS model "appeals to organizations because it can free up staff to concentrate on more-strategic, value-adding processes." Part of the appeal is a belief that SaaS ERP is "instant on," which means that it can be implemented with little or no intervention. "However," she writes, "the business still must be reengineered, processes redefined, integration points defined and so on. The instant-on perception that drives adoption also makes it an inhibitor."

Nevertheless, IT staff are starting to adapt to the new environment. Developers, for instance, will have to embrace new programming languages and open Web standards when creating enterprise

software. "I've got some learning to do in my 50s," says Serena Software's Clement. In some ways, he's already started, as his company has begun building SaaS applications along side its traditional software development tools.

Clement says he has to learn more about Web 2.0 and Java programming, but feels ready for the challenge. "My experience has always been that programming is programming," he says. "The language is sort of a detail. The environment is changing, and while I have fears, there's nothing more thrilling than working on something that will be relevant for the future."

Meanwhile, for IT support people who handle enterprise infrastructure and back-end support, future roles might include working in the data center of a SaaS vendor, or helping to ensure that a company can integrate various SaaS apps, says Fred Luddy, president and CEO of Service-Now, an IT service management company that runs on a SaaS model.

"Integration will be the main challenge," he says. "IT will be at a higher level." **CIO**

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Senior Editor Thomas Wailgum contributed to this article.

To comment, go to www.cio.com/article/457926.

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Wowing the Board of Directors

IT leaders often find themselves called upon to address their companies' boards of directors. For many, the boardroom is an alien environment, full of high-powered execs with little affinity for technology. To succeed in this setting, CIOs must effectively convey their wins, opportunities and challenges in helping achieve business goals. For tips on wowing the board, we turned to some of the more board-seasoned members of the CIO Executive Council.

Know the players. Jeff O'Hare is senior vice president of enterprise information technology at business process outsourcing provider West Corp. At past employers he has researched board-member backgrounds, then used this information to frame his presentations and follow-up conversations. O'Hare focused his information gathering on areas like functional experience, industry, company size and comfort with risk.

"When I was making a presentation to a board with heavy finance and operations experience, I made sure to include an appendix of highly detailed financials and a snapshot of rolled-out milestones directly from the actual project plan," says O'Hare.

Develop ongoing relationships. Pamela Rucker, vice president of IT at PSC, a privately held environmental services company, holds regular pre-meetings with directors from the PSC executive board and representatives of its ownership to learn their points of view. Rucker estimates she spends 20 percent of her board interaction time in these one-on-one meetings. She also uses them to ask questions

and air concerns privately. "The actual board meeting can't be the first time that you're telling the board about changes or plans, or they're going to feel blindsided," she says.

Rucker suggests using these meetings to sell your ideas prior to presenting them formally. They also let you tell your story not only multiple times but in multiple ways. "Sometimes I may have to present information three different ways in three different meetings in order for everyone to get it," Rucker notes.



Pamela Rucker

How does Rucker get time with individual board members? Her face time with directors from her own company happens in monthly IT Steering Committee meetings they attend. For members from the company's ownership group, Rucker watches for their particular interests during board meetings, then establishes a rapport around those topics.

David Webb is former CIO of SVB Financial Group, where he is now chief operations officer. He agrees that engaging the board isn't just a quarterly, formal interaction. "You need to want more interaction and find ways to do so. If you don't, you won't build that relationship," he says. Webb finds that access to board members becomes easier over time as long as you have good reason to meet. "The first call is always the hardest. If you have difficulty making a cold call, have the CEO clear the path for you," he says.

Get feedback from a board buddy. Twila Day, CIO at \$33 billion food company

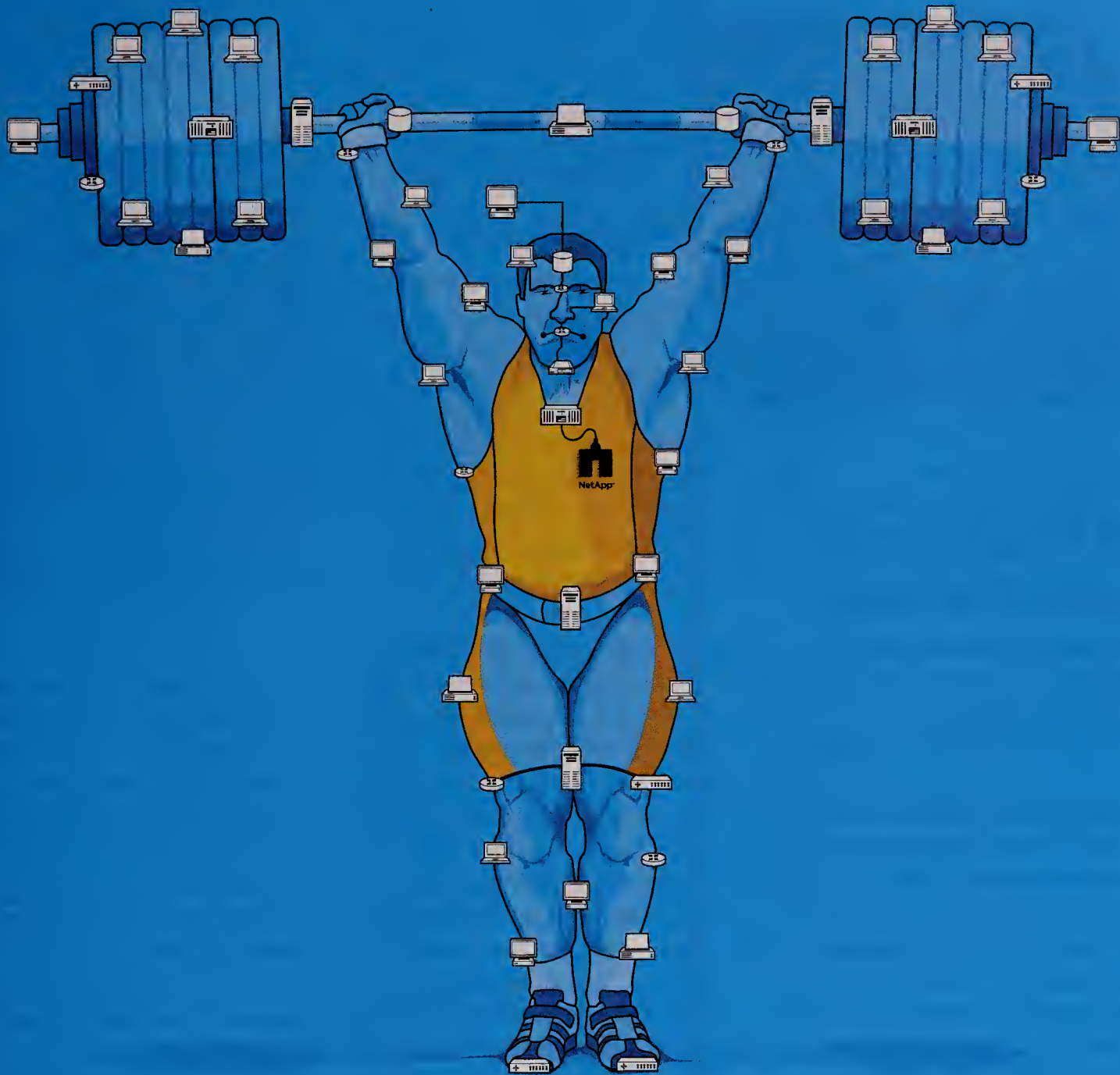
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[ONE-LINER]

"Every interaction with board members is an opportunity to build credibility, whether it's an encounter in the hall or a scheduled meeting."

—DAVE WEBB, CHIEF OPERATIONS OFFICER, SVB FINANCIAL GROUP





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Jeff O'Hare

[TOOLS WE USE]

Let Financials Do the Talking

In his board presentations at past companies, Jeff O'Hare, senior vice president of enterprise information services at West Corp., included the following financial information (usually in a one-page financial overview, with supporting details in later slides). All of his finances were tightly aligned with the office of the CFO, and the financial team validated the numbers. In some cases, O'Hare would present the high-level finances and then let the CFO field the detailed questions, which showcased collaboration at the executive team level and sent a powerful message to the board.

What a financial presentation should include:

- » Impact to this year's budget/P&L
- » Impact to cash flow
- » Impact to EBITDA
- » Impact to net income
- » CapEx and OpEx
- » Return on investment and/or cost benefit analysis (CBA) with supporting details
- » Revenue projections, margins, market analysis/competitive analysis, geographical variances/globalizations, etc.
- » Carrying costs on investments, if applicable

—C.M.

Board of Directors

Continued from Page 50

Sysco, developed a sounding board within the board. She pings select members prior to her presentations to preview what she wants to share with the group. She developed this tactic after a one-on-one meeting with a new board member who had a strong technology background. When a second member with similar experience joined the board, Day asked if she could send both of them her presentations ahead of time for their input. This peer review helps Day fine-tune her message, gives her fresh ideas from technologically experienced board members and helps avoid last-minute surprises during the actual presentation.

Get organized. O'Hare's objective in a board presentation was to get the right message across. "I typically provided them with enough information to guide them to the conclusion that I wanted, but I didn't tell them my opinion right away," says O'Hare. He found that buy-in was stronger when members felt they contributed to the solution. O'Hare organized his slides using the SOAE model (situation, opportunity, action, expected results) and never arrived at a board meeting without multiple solutions to a stated issue or problem in his back pocket. "I could demonstrate that an objective and thoughtful approach was used in resolving the problem," he says. "I also found that having different ways to solve a problem was a good way to prepare for the eventual questions."

Get to the point. As Webb constructs his board presentation, he asks himself, "How do I get my point across in the first thirty seconds?" Day keeps her's concise. "I lay the foundation and then, in future meetings, I move forward with more of an 'update' format," she says. O'Hare used an executive summary at the beginning to grab attention and then shared supporting information.

Emphasize profitability. The most important thing in any board communication is to tie it to profitability and business value. "CIOs really have to think like a CEO and investors when presenting to the board," says O'Hare. "For example, it's not IT cutting costs; it's about how this cost savings idea fits into the overall cost model and positively contributes to competitive margin." This is what board members want to hear about. At past employers, O'Hare sent customized versions of his quarterly IT reports to the board. These reports profiled technology objectives and successes and tied them to business value.

Involve your team. O'Hare involved senior team members (director-level and up) in prepping for board meetings and providing input on the presentation. "My philosophy was that if they needed to come off the bench, they needed exposure so they were ready," he says. **CIO**

Carrie Mathews, group manager of member services, can be reached at cmathews@cxo.com. To comment on this article, go to www.cio.com/article/457918.



Close client relationships drive outsourcing success

ACS' collaborative approach fosters innovation

Derrell James, EXECUTIVE VICE PRESIDENT, GROUP PRESIDENT ITO SOLUTIONS, AFFILIATED COMPUTER SERVICES (ACS) INC.

James is responsible for IT outsourcing operations as well as the growth of a line of business that comprises nearly 25 percent of the Fortune 500 company's business, or \$1.4 billion in revenue annually. ACS serves thousands of government and commercial clients around the world.

As IT outsourcing has evolved, it has become clear that the most successful outsourcing arrangements possess careful management of the relationship between the customer and the services provider. Customers expect services providers to be, among other things, knowledgeable about their businesses and effective communicators. The most successful services providers know how to best collaborate with clients to derive clear goals, evaluate progress and share ownership of projects.

James sat down recently with CXO Media to discuss ACS' focus on client intimacy and its positive impact on the business.

What differentiates ACS from its IT outsourcing counterparts?

For us, the answer is client intimacy—and it's more than a feel-good program. Everything we do is built around creating an intimate relationship with our clients. We've developed a unique executive sponsorship program, in which our clients have go-to ACS executives who contact them regularly and participate in their governance meetings. And, though it's a bit unheard of in the outsourcing industry, we have a 12-member client council that meets on a regular basis to share ideas.

What is driving demand for your services these days?

Outsourcing began as an industry that could deliver best practices and, at the same time, reduce costs for companies.

Those benefits still drive demand, but today there are many more factors behind demand for our services. We serve many people whose internal IT departments don't have the capabilities to grow and evolve their organizations. They are turning to partners they can trust, who understand their business, and who they can rely on to bring innovative solutions to help them achieve success and IT excellence.

Why is IT outsourcing particularly important in an uncertain economic climate?

ACS can help clients survive and perhaps prosper in this climate. For one, there is clearly an opportunity in an outsourcing environment to reduce costs. We also offer multiple innovative solutions—such as virtualizing clients' server environments or consolidating their data centers into pooled environments—that can reduce IT budgets. We've proven ACS' outsourcing value proposition time and time again. We are a trusted advisor to our clients—we know and understand their business—and are able to grow along with them.

Where are you seeing significant growth in your business?

We've seen continued growth in North America, but there's also been a significant opportunity in Europe. In the ITO business, we've spent the past year and a half expanding into Europe. Focusing on the mid-market, we acquired Syan Holdings in the United Kingdom and sds business

services in Germany to enhance our global capabilities. These companies share our philosophy of building close, collaborative relationships with our clients.

How does ACS measure the success of its business?

The ultimate measure of success is when a client renews its relationship with you, and grows with you. Our close relationship with our clients has helped us achieve the best renewal rate in the industry. A prime example of this came in recent months when Ingersoll Rand expanded its long-standing relationship with ACS by awarding us a 10-year IT outsourcing contract. Ten-year outsourcing deals are uncommon these days but our close working relationship contributed to this expanded partnership. The best way to secure longer term contracts is to collaborate with clients, develop multiple touch points to understand their business, and develop an innovative strategy around their IT organizations to help them grow.

FOR MORE INFORMATION:

Check out the white paper titled "Business Process Utility: Accelerating Change Through Standardization" at www.cio.com/whitepapers/ACScollaboration.

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Things I've Learned

THE VOICE OF EXPERIENCE * AS TOLD TO KRISTIN BURNHAM

Chris Gardner knows what it takes to be successful in business. Once homeless, he's now the founder and CEO of Gardner Rich, a private stock-brokerage firm, and author of the autobiography-turned-movie *The Pursuit of Happyness*.

Sometimes big risks are worth taking.

I started my business out of my house with \$10,000. It was a bold move, and some thought I was crazy. I didn't have a lot of money, nor did I have a college degree, so I had to figure out how to get people to do business with me. It took some time, but eventually I saw my company growing. I started hiring more people and doing more business. That's one risk that had a great payoff.

Don't doubt yourself.

If you want to be world-class at something—anything—there are two things you need: an all-or-nothing mentality and a passion for what you're doing. There should be no plan B. Back-up plans are what you put in place when there's doubt in your mind that you can't achieve what you're setting out to do.

Passionate people make the best employees.

Some of the biggest mistakes I've made were in hiring. I've learned that the most successful hires are those who have a genuine love for what they do—that's something you can't teach them. The worst people you can hire? Family members. Don't ever do it.

Mentoring can be a powerful influence for everyone involved.

When I was on *Oprah* to promote the movie, she spent the first 30 minutes of the show interviewing Will Smith and his son, and the last 30 minutes with me. When I was introduced, I kept telling

myself to be cool because I knew Oprah would try to make me cry. And I was cool for a whole 27 minutes! And then she said, "OK Chris, now we have someone who wants to thank you." Then they brought out my very first intern, and I lost it. Mentoring is one of the most enjoyable and fulfilling things that I do. I've had some young people who've worked for me go on to do some very special things in their career.

I have a love/hate relationship with technology.

I'm the guy who calls the IT department in a panic and says, "What the f*** is wrong with this thing?!" My business is fast-paced, and I need things to work. When people ask if there's a piece of technology I can't wait to get my hands on, I tell them I'm saving up for something big. A "Citation X"—a jet that will get me from coast to coast in four hours. Now that's my kind of technology.

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Where is the keyboard? Don't all BlackBerrys have keyboards? This just has a screen that looks like a keyboard and—oh sweet sassafras, did it just click? It clicked right where I wanted it to. Is that supposed to happen? And is it supposed to feel so good? What mad genius is behind this?



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